

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) An electronic ballast for operating a gas discharge lamp, comprising:

a switch-mode power supply circuit for supplying power to the discharge lamp, said switch-mode power supply circuit comprising a half-bridge or a full-bridge commutating forward converter with at least a rail line for supplying a rail voltage, a first switching element having a control terminal and switching terminals, a second switching element having a further control terminal and further switching terminals, and an output node between said first and second switching elements for supplying a converter current to the lamp;

a current-determining circuit for providing a signal representative of the converter current, wherein the current-

determining circuit is not connected to the control terminal or the further control terminal;

wherein the current-determining circuit comprises a first current sensing circuit for sensing the current in a first position between the rail and the output node and a second current sensing circuit for sensing the current in a second position between the output node and ground.

2. (Previously Presented) The electronic ballast according to claim 1, wherein the first sensing circuit comprises a first current transformer having a primary winding connected to said first position and the second sensing circuit comprises a second current transformer having a primary winding connected to said second position, the secondary windings of the first and second current transformers being connected in series for providing a combined signal representative of the converter current.

3. (Previously Presented) The electronic ballast according to claim 1 or 2, comprising a gate driving circuit connected to the gates of the first switching element and the second switching

element and to the current-determining circuit for controlling the switching of the switching elements on the basis of said signal representative of the converter current.

4. (Previously Presented) A device for determining the current supplied by a commutating forward converter to a discharge lamp, which converter can be connected to a rail line for supplying a rail voltage and comprises a first switching element having a control terminal and switching terminals, a second switching element, and an output node between said switching elements for supplying said current to the discharge lamp, the device comprising a first current sensing circuit for sensing the current in a first position between the rail and the output node and a second current sensing circuit for sensing the current in a second position between the output node and ground, wherein the first current sensing circuit is not connected to the control terminal.

5. (Previously Presented) The device according to claim 4, wherein the first sensing circuit comprises a first current transformer having a primary winding connected to said first

position and the second sense circuit comprises a second current transformer having a primary winding connected to said second position, the secondary windings of the first and second current transformers being connected in series for providing a combined signal representative of the converter current.

6. (Previously Presented) A method of determining a converter current supplied by a commutating forward converter to a gas discharge lamp, the converter including at least a rail line for supplying a rail voltage, a first switching element having a control terminal and switching terminals, a second switching element, and an output node between said switching elements for supplying the converter current to the gas discharge lamp, the method comprising the act of:

sensing a first current in the converter in a first position between the rail line and the output node and providing a first output signal by a current sensor which is connected to one of the switching terminals and is not connected to the control terminal;

sensing a second current in the converter in a second position between the output node and ground and providing a second output

signal;

adding the first output signal and the second output signal so as to provide a third output signal representative of the converter current.

7. (Previously Presented) The method according to claim 6, wherein the first output signal is the first current measured in the first position, and the second output signal is the second current measured in the second position, and wherein the third output signal is a sum of the first current measured in the first position and the simultaneously measured second current in the second position.

Claim 8 (Canceled)

9. (Previously Presented) The electronic ballast of claim 1, wherein the first switching element is connected between one of the switching terminals and a first rail of the converter, and wherein the second switching element is connected between one of the further switching terminals and a second rail of the converter, the

second switching element not being connected to the control terminal or the further control terminal.

10. (Previously Presented) The electronic ballast of claim 1, wherein the first current sensing circuit and the second current sensing circuit have substantially identical low-frequency responses.

11. (Previously Presented) The device of claim 4, wherein the second switching element has a further control terminal and further switching terminals, and wherein the first current sensing circuit is not connected to the further control terminal.

12. (Previously Presented) The device of claim 4, wherein the first current sensing circuit and the second current sensing circuit have substantially identical low-frequency responses.

13. (Previously Presented) The device of claim 12, wherein the first switching element is connected between one of the switching terminals and a first rail of the converter, and wherein the second

switching element is connected between one of the further switching terminals and a second rail of the converter.

14. (Previously Presented) The method of claim 6, wherein the second current is sensed by a further current sensor which is connected to one of further switching terminals of the further switching element and is not connected to a further control terminal further switching element.

15. (Previously Presented) The method of claim 14, wherein the current sensing circuit and the further current sensing circuit have substantially identical low-frequency responses.